Docket No.: 13111-00021-US
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Wolfgang Paulus et al.

Application No.: 10/535,525 Confirmation No.: 9339

Filed: July 1, 2005 Art Unit: 1651

For: ENZYMATIC SYNTHESIS OF POLYOL ACRYLATES Examiner: T. E. Underdahl

DECLARATION UNDER 37 C.F.R. §1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Now comes Dietmar HARING, who deposes and states that:

1. I am a graduate of University of Würzburg, Germany, and received my degree in the year 1995 in chemistry (Master of Science) and in 1998 in chemistry (Ph.D.).

2. I have been employed by BASF SE for 6 years as a chemist in the field of biocatalysis.

3. I am one of the inventors of U.S. Serial No. 10/535,525 (the " '525 application"). I am familiar with U.S. Patent No. 5,288,619 issued to Brown ("Brown").

4. For the above reasons, I consider myself an expert in the biocatalysis art.

5. The following experiments were carried out by me or under my direct supervision and control:

6. In order to compare the enzymatic activities of lipase enzymes as applied according to the present invention, i.e. lipases from *Burkholderia sp.* and *Candida sp.*, with the enzymatic activity

of a lipase from *Mucor miehei* as taught by Brown, I had the following experiment performed to determine, whether said enzymes are applicable for the enzymatic synthesis of polyol acrylates.

7. The following reaction mixture was prepared for each lipase enzyme:

50 mmol	ethyl acrylate
5 mmol	glycerol
10 ml	tert.-butanol
1 g	molecular sieve 5 Å
100 mg	enzyme

The reaction mixture was shaken at room temperature for 3 days, filtered and conversion of substrate was analyzed by gas chromatography.

8. The following conversion rates were observed:

Lipase from	Conversion [%]
Burkholderia plantarii	90
Candida antarctica B ('525 application (invention))	95
Mucor miehei (Brown (prior art))	0

9. The data clearly shows that lipases from *Burkholderia sp* and *Candida sp*, (according to the '525 application) are applicable for the enzymatic synthesis of polyol acrylates. However, the lipase of *Mucor miehei* as taught by Brown is not applicable for the enzymatic synthesis of polyol acrylates.

10. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dietmar Haring

Feb. 14, 2011
Date